Applicant: Susumu Yamada Attorney's Docket No.: 16359-004001 / 689/SM

Serial No.: 10/721,746

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## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

## Listing of Claims:

- 1. (Cancelled)
- 2. (Cancelled)
- 3. (Cancelled)
- 4. (Cancelled)
- 5. (Cancelled)
- 6. (Cancelled)
- 7. (New) A sequential comparison type AD converter comprising:

series resistors for generating at respective connection portions reference values to convert an analog value to an m-bit digital value;

a comparator for sequentially comparing the analog value and one of the reference values and outputting a digital value;

a plurality of capacitive elements for distributing any one of the reference values by a capacitance ratio, the plurality of capacitive elements including a first capacitive element and a second capacitive element; and

a control unit for switching a value compared to the analog value by the comparator from the reference value to a distribution value of the plurality of capacitive elements when the comparator outputs an m-bit digital value,

wherein the analog value is converted to an (m + n) bit digital value,

wherein the first capacitive element and second capacitive element are connected in series between any one of the reference values and a ground, and

wherein connection portions of the first capacitive element and second capacitive element are connected to inputs of the comparator to which the analog value is not input.

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8. (New) The sequential comparison type AD converter according to claim 7, wherein the plurality of capacitive elements distribute by the capacitance ratio the difference of reference values generated at predetermined connection portions of the series resistors.

- 9. (New) The sequential comparison type AD converter according to claim 7, wherein the capacitance ratio of the first capacitive element and second capacitive element is  $1:(2^n 1)$ , in accordance with the (m + n) bits.
- 10. (New) The sequential comparison type AD converter according to any one of claims 7 to 9, further comprising a switching circuit for switching on and off input of the reference value to the comparator, based on an output of the control unit.
- 11. (New) A microcomputer comprising the sequential comparison type AD converter according to claim 7.